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10/774,100	02/06/2004	Wu Qing	9896-000024	9010

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 9-18* is/are rejected.

7)☒ Claim(s) *7 and 8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>06 February 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claims 11, 17 and 18 are objected to because of the following informalities:

        Re claim 11, line 2, "similar to" is a relative terminology.

        Re claim 17, line 4, "planed" should read - - planned - -.

        Re claim 17, line 4, "basic network" should read - - basic network layer - -.

        Re claim 18, "method" should read - - system - -.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form

the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1, 2, 9, 10, 12 and 14-17 are rejected under 35 U.S.C. 102(e) as being anticipated

by Pan et al (US 6760306), hereinafter referred to as Pan.

        Re claim 1, Pan discloses managing a packet with IP addresses over network to

manage quality of service (QoS) on the network (*providing guaranteed QoS in an IP*

network, column 3, lines 43-46; column 4, lines 8-10). Pan discloses receiving a request

for service reservation with data specifying the time/duration during which resources for

the service reservation are to be allocated (*receiving a service request with guaranteed*

QoS requirement from a subscriber, column 4, lines 16-18; column 7, lines 54-55),

extracting source and destination addresses from the service reservations and determining

each link along the path has sufficient bandwidth to accommodate the service reservation

(*a relevant service entity in the network obtaining the addresses of source subscriber and*

destination subscriber and QoS parameters for the service through analyzing the service

request, column 7, lines 55-56; column 8, lines 5-8), providing a path for the requested

service to resource validator in the network resource manager (*bearer control layer of the*

network, figure 2, element 11) and resource validator validating a service reservation

(*sending a route selection and resource application request to bearer control layer of the*

network, column 7, lines 57-58; lines 62-63) and a resource validator (*a bearer network*

resource manager, figure 2, element 22) provisioning a path based on source and

destination addresses along with sufficient resources to accommodate the requested

service over a network segment (*service bearer logic network*, figure 1, element 10a)

(*allocating route and resources for the service in the service bearer logic network*

according to addresses of the source and the destination subscriber and service type,

column 7, lines 55-56; column 8, lines 2-8). Pan implicitly discloses forwarding the

traffic streams in the service bearer logic network according to the route and resources

determined by the bearer control layer.

Re claim 2, Pan discloses providing pre-planned and pre-configured network

service based on the service type (column 3, lines 37-42).

Re claim 9, Pan discloses a resource validator responding to engine (*service control layer*, figure 2, element 26) for rejecting a service reservation if there are not sufficient network resources to accommodate the service reservation from a subscriber (*informing the service control layer to reject the service request from the subscriber when a bearer network resource manager finds the route selection is failed due to not enough resources in the logic topology of the area*, column 8, lines 28-32).

Re claim 10, Pan discloses a network providing a service reservation with the same or different network topologies for each service type (*service bearer logic networks have the same topology or different topologies for each service type*, column 7, lines 54-58).

Re claims 12 and 14, Pan discloses a network being an Internet (*service bearer logic network can be a metropolitan area network, a provincial backbone network, a national backbone network or even an international backbone network*, column 3, lines 34-35).

Re claim 15, Pan discloses servicing video streaming with priority (*the service with guaranteed QoS requirement is a voice service, a video communication service, a stream media video service or other service with special QoS requirement*, column 3, lines 37-42).

Re claim 16, Pan discloses deactivating service reservations involving removing reservation artifacts for the designated reservations from the network devices (*after a subscriber terminates or finishes the service, said bearer control layer releasing*

resources occupied by the service, and informing correspondent edge routers to cancel processing for the traffic stream, column 9, lines 43-46).

Re claim 17, Pan discloses managing a packet with IP addresses over network to manage quality of service (QoS) on the network with network devices, where edge nodes, edge router, tandem switching nodes and core routers are inherently located (*providing guaranteed QoS in an IP network comprising a basic network layer including edge routers and core routers for bearing various IP service packets,* column 3, lines 43-46; column 4, lines 8-10), receiving a request for service reservation (*a service control layer including service entities for processing service requests,* column 4, lines 16-18; column 7, lines 54-55), providing a path for the requested service to resource validator in the network resource manager (*bearer control layer including resource managers for managing the bearer network resources of said service bearer logic layer and basic network layer,* figure 2, element 11) and provisioning a path based on source and destination addresses along with sufficient resources to accommodate the requested service over a network segment (*a service bearer logic layer planned and configured from the basic network layer including edge nodes, tandem switching nodes and connections among them for bearing traffic streams with guaranteed QoS requirements,* column 7, lines 55-56; column 8, lines 2-8).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 3-6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan in view of Seo (US 20020071389).

        Re claims 3, 5 and 18, Pan discloses a network providing a different level of network services, but fails to disclose label switched path (LSP) with multi-protocol label switching (MPLS) between edge routers and tandem switching nodes. Seo discloses a MPLS network comprising edge routers and a plurality of label switch routers (figure 1; paragraph [0029], lines 14-18). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the network of Pan to a MPLS network with label edge routers and label switch routers so that IP traffic would be controlled efficiently by provisioning of differential services to subscribers via a label switched path.

        Re claims 4 and 6, Pan discloses selecting nodes when network topology monitor obtains a path for the requested service (*tandem switching nodes being a part of core routers which are selected from network resource management areas,* column 7, lines 57-60).

        Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pan in view of Chen et al (US 7092380), hereinafter referred to as Chen.

Re claim 11, Pan discloses all of the limitations of the base claim, but fails to disclose a service bearer logical network being a public telephone network. Chen discloses using public telephone network instead of Internet (column 11, lines 55-56). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Pan to use public telephone network for the benefit of some symmetry in the routing of traffic flows and aggregate demand in public network since Pan suggests using different types of network.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pan in view of Duguay et al (US 6266694), hereinafter referred to as Duguay.

Re claim 13, Pan discloses all of the limitations of the base claim, but fails to disclose dividing the network into different network resource management areas which are respectively managed by correspondent bearer network resource manager. Duguay discloses dividing the network into two regions and managed by a network manager, respectively (column 5, lines 18-20). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the network of Pan to be divided into different network areas managed by different network managers for the benefit of efficient network management by distributing the responsibility of network management to a plurality of network managers.

Allowable Subject Matter

6.   Claims 7 and 8 are objected to as being dependent upon a rejected base claim, but would

be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hong Cho whose telephone number is 571-272-3087.

The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wing Chan can be reached on 571-272-7493. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

hc
Hong Cho
Patent Examiner
6/27/07